

APPENDIX A

'121 patent, claim 7	'107 patent, claim 1	'831 patent, claim 1
<p>An apparatus for storing video pixel data representing video images of a first resolution and, for each of the images at said first resolution, a corresponding video image at a second resolution, comprising:</p> <p>random access memory means for storing video pixel data representing one of a succession of full size images at said first resolution and a corresponding reduced size version thereof at said second resolution;</p> <p>bulk memory means for receiving said video pixel data from said random access memory means and for storing said succession of full size images and the corresponding reduced size versions thereof, and for outputting upon a user's command, either a selected one of the successive full size images or selected ones of the corresponding reduced size versions thereof for direct transfer to, and storage back in, said random access memory means;</p> <p>means responsive to said random access memory means for selectively generating one of said corresponding reduced size versions from the respective full size image in said random access memory means, and for transferring the video pixel data representing the corresponding reduced size version back to the contents of said random access memory means.</p>	<p>Electronic still imaging apparatus employing digital processing of image signals corresponding to a still image and storage of the processed image signals in a removable digital memory, said imaging apparatus including an area image sensor having a two dimensional array of photosites corresponding to picture elements of the image and means for exposing said sensor to image light so that analog image information if (is) generated in respective photosites, said imaging apparatus comprising:</p> <p>means for converting analog image information into digital image signals corresponding to the picture elements;</p> <p>an image buffer with storage capacity for storing digital image signals corresponding to a plurality of still images;</p> <p>control processor means responsive to user instructions for initiating operation of said exposing means, for clocking the image information from said sensor, and for controlling said converting means to deliver said digital signals to said image buffer, said control processor means loading digital image signals corresponding to said plurality of still images into said image buffer at an input rate commensurate with normal operation of the camera;</p> <p>digital processing means for operating on blocks of stored digital image signals at a processing throughput rate different than said input rate, said digital processing means including means for transforming blocks of digital image signals into corresponding sets of transform coefficient signals and for encoding the transform coefficient signals into a compressed stream of processed digital image signals;</p> <p>means responsive to said digital processing means for downloading the processed image signals to said removable digital memory; and</p> <p>diagnostic means for monitoring the utilization of said image buffer whereby information is generated as to the current condition of the image buffer.</p>	<p>Electronic still imaging apparatus employing digital processing of image signals corresponding to a still image and storage of the processed image signals in a digital memory, said imaging apparatus including an image sensor having an array of photosites corresponding to picture elements of the still image and means for exposing said sensor to image light so that analog image information is generated in respective photosites, said imaging apparatus comprising:</p> <p>means for converting the analog image information into digital imaging signals corresponding to a predetermined picture resolution;</p> <p>means for subsampling said digital image signals to generate reduced resolution image signals corresponding to a picture resolution lower than said predetermined resolution;</p> <p>means for generating a multi-format image file representative of plural resolutions of the still image from the combination of said digital image signals and said reduced resolution image signals, said combination forming a singular file structure in which said reduced resolution image signals occupy a defined file area in relation to said digital image signals and are commonly accessible therewith for display and processing; and</p> <p>means for storing the image file in said digital memory.</p>